

IN THE CLAIMS

Claim 1. (Currently amended) An electric power steering system comprising:

an electric motor disposed in a vehicle to apply torque to a steerable wheel and a ;
a vehicle speed sensor, said vehicle speed sensor generating a vehicle speed signal;
a controller coupled to said vehicle speed sensor and said electric motor;

wherein said controller generates a scheduled compensated torque command to said electric motor, said scheduled compensated torque command based on ~~at least one of a torque command signal, a compensated torque command signal, and~~ a blend of said torque command signal and said compensated torque command signal, wherein ~~any~~ at least one of said torque command signal, said compensated torque command signal ~~and or~~ said blend is based on said vehicle speed signal.

Claim 2. (Original) The system of Claim 1 wherein said scheduled compensated torque command is based on a blend scheduling signal.

Claim 3. (Original) The system of Claim 1 wherein said blend scheduling signal is based on a look-up table responsive to said vehicle speed signal.

Claim 4. (Original) The system of Claim 1 wherein said torque command signal is based on a torque signal and is indicative of a desired assist torque for said steering system.

Claim 5. (Original) The system of Claim 1 wherein said compensated torque command signal is based on applying a compensator to said torque command signal.

Claim 6. (Original) The system of Claim 5 wherein said compensator is responsive to a blend scheduling signal, wherein coefficients of said compensator are based on said blend scheduling signal.

Claim 7. (Original) The system of Claim 5 wherein said compensator comprises a filter configured to modify spectral content of said compensated torque command signal.

Claim 8. (Original) The system of Claim 7 wherein said compensator comprises at least one of: at least one pole, at least one pole and at least one zero, and a schedulable gain.

Claim 9. (Original) The system of Claim 7 wherein said compensator comprises a frequency based notch filter configured to maintain stability of a torque control of said electric power steering system.

Claim 10. (Original) The system of Claim 1 wherein said blend comprises a combination of said torque command signal and said compensated torque command signal, said combination responsive to a blend scheduling signal.

Claim 11. (Original) The system of Claim 1 wherein said blend comprises a selectable threshold for scheduling a combination of said torque command signal and said compensated torque command signal.

Claim 12. (Original) The system of Claim 1 wherein said scheduled compensated torque command is configured to facilitate characterization of at least one of: system stability, torque disturbance rejection; and input impedance.

Claim 13. (Original) The system of Claim 1 wherein said scheduled compensated torque command is configured to characterize on-center feel of said torque control of said electric power steering system.

Claim 14. (Currently amended) A method of controlling an electric power steering system, the method comprising:

receiving a torque command signal;

receiving a vehicle speed signal responsive to a speed of a vehicle; and

generating a scheduled compensated torque command, said scheduled compensated torque command based on ~~at least one of said torque command signal, a compensated torque command signal, and a blend of said torque command signal and said compensated torque command signal, wherein any least one of said torque command signal, said compensated torque command signal or~~ said blend is based on said vehicle speed signal.

Claim 15. (Original) The method of Claim 14 wherein said scheduled compensated torque command is based on a blend scheduling signal.

Claim 16. (Original) The method of Claim 14 wherein said blend scheduling signal is based on a look-up table responsive to said vehicle speed signal.

Claim 17. (Original) The method of Claim 14 wherein said torque command signal is a based on said torque signal and is indicative of a desired assist torque for said steering system.

Claim 18. (Original) The method of Claim 14 wherein said compensated torque command signal is based on applying a compensator to said torque command signal.

Claim 19. (Original) The method of Claim 18 wherein said compensator is responsive to a blend scheduling signal, wherein coefficients of said compensator are based on said blend scheduling signal.

Claim 20. (Original) The method of Claim 18 wherein said compensator comprises a filter configured to modify spectral content of said compensated torque command signal.

Claim 21. (Original) The method of Claim 20 wherein said filter comprises at least one of: at least one pole, at least one pole and at least one zero, and a schedulable gain.

Claim 22. (Original) The method of Claim 20 wherein said compensator comprises a frequency based notch filter configured to maintain stability of a torque control of said electric power steering system.

Claim 23. (Original) The method of Claim 14 wherein said blend comprises a selectable threshold for scheduling a combination of said torque command signal and said compensated torque command signal.

Claim 24. (Original) The method of Claim 14 wherein said blend comprises a combination of said torque command signal and said compensated torque command signal, said combination responsive to a blend scheduling signal.

Claim 25. (Original) The method of Claim 14 wherein said scheduled compensated torque command is configured to facilitate characterization of at least one of: system stability, torque disturbance rejection; and input impedance.

Claim 26. (Original) The method of Claim 14 wherein said scheduled compensated torque command is configured to characterize on-center feel of said torque control of said electric power steering system.

Claim 27. (Currently amended) A storage medium encoded with a machine-readable

computer program code;

said code including instructions for causing a computer to implement a method for controlling an electric power steering system, the method comprising:

receiving a torque command signal;

receiving a vehicle speed signal responsive to a speed of a vehicle; and

generating a scheduled compensated torque command, said scheduled compensated torque command based on ~~at least one of said torque command signal, a compensated torque command signal, and~~ a blend of said torque command signal and said compensated torque command signal, wherein ~~anyt least one~~ of said torque command signal, said compensated torque command signal and said blend is based on said vehicle speed signal.

Claim 28. (Currently amended) A computer data signal comprising:

said computer data signal comprising code configured to cause a processor to implement a method for controlling an electric power steering system, the method comprising:

receiving a torque command signal;

receiving a vehicle speed signal responsive to a speed of a vehicle; and

generating a scheduled compensated torque command, said scheduled compensated torque command based on ~~at least one of said torque command signal, a compensated torque command signal, and~~ a blend of said torque command signal and said compensated torque command signal, wherein ~~anyt least one~~ of said torque command signal, said compensated torque command signal and/or said blend is based on said vehicle speed signal.

Claim 29. (Currently amended) An electric power steering control system comprising:

a means for detecting a vehicle speed and generating a speed signal indicative thereof;

a means for receiving said torque command signal;

a means for receiving said vehicle speed signal;

a means for generating a scheduled compensated torque command, said scheduled compensated torque command based on ~~at least one of said torque command signal, a compensated torque command signal, and a blend of said torque command signal and said compensated torque command signal~~, wherein ~~anyt least one~~ of said torque command signal, said compensated torque command signal ~~orand~~ said blend is based on said vehicle speed signal.